Clinical Section

Leucorrhoea: Its Diagnosis and Treatment *

by

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Leucorrhoea is here used in a broad sense to include all cases of excessive and / or abnormal vaginal discharge, exclusive of blood, urine, or faeces. Its restricted meaning, of course, applies only to a white discharge popularly known to women as "the whites" and which represents merely an excess of the normal cervico-vaginal secretions.

Leucorrhoea is one of the commonest and most troublesome complaints observed in general and in gynaecological practice. In addition, it resembles in its amenability to treatment, diseases of the skin, it is either easily curable or apparently permanently incurable. However, too often leucorrhoeas are treated in a routine or haphazard fashion, without regard to the underlying aetiology and pathology, and it is no wonder that results are frequently unsatisfactory. The key to treatment, as in most disease processes, lies in the accurate detection of the origin or source of the flow. In the second place, leucorrhoea has been accorded an apathy by the profession second only to the common cold. How commonly a patient will say she has had a discharge for years but that a doctor on being consulted about it, has quickly dismissed the subject with a cursory "Oh! a discharge is nothing!" "It won't do any harm" or "it is natural for women who have borne children, etc." If only those same doctors could be made to suffer from an irritating urethral discharge for months!

Under normal conditions in the healthy woman, secretion is produced by the cervix and vagina, and to a smaller extent by the endometrium, Bartholin's, and other vulvar glands; but a balance is so established between formation and evaporation that the surfaces are kept just moist and clothing is not stained. Exceptions to this rule may occur just before and just after a menstrual period, and again during sexual excitement, but at all other times the external vulvar and perineal surfaces should be dry. The woman who is compelled to wear a pad for protection between periods certainly has a pathological discharge; so also is one who complains perhaps of only slight staining but of definite irritation of the skin. In cases of moderate and marked perineal and levator relaxation with the associated eversion of the vaginal walls some secretion will of necessity be brought to the surface and such patients may complain of excessive discharge when, in truth, it is only the outward projection of the normally existing vaginal moisture. In these, pessary or repair will cure their so-called "leucorrhoea" providing no associated lesions are present.

Classification

The following, I believe, affords a fairly practical classification of the causes of leucorrhoea, particularly from the viewpoint of diagnosis:

(a) *Constitutional, Systemic and Endocrine Causes.*

1. *Excess of normal secretions.*
   - (*a*) Pelvic congestion.
   - (*b*) Abnormal sex life.
   - (*c*) Hyperestrinism.
2. *Abnormal Discharge.*
   - (*a*) General ill health—Anaemia. Constipation. Malnutrition. Tuberculosis.
   - (*b*) Diabetes Mellitus.

(b) *Local Causes.*

1. *Excessive normal secretion.*
   - (*a*) Prolapse, cystocele, etc.
   - (*b*) Granulosa cell tumour, etc
2. *Abnormal Discharge.*
   - (*a*) Endocervicitis. Acute (gonorrhoea). Chronic (puerperal). (gonorrhoeal).
   - (*b*) Vaginitis:
     1. Bacterial—cocci, B. coli, diphth., etc.
     2. Chemical—douches.
     3. Trichomoniasis — Trich. vaginalis.
     4. Moniliasis—thrush.
     5. Mechanical—foreign bodies.
   - (*c*) Neoplasms—Benign (polyps). (fibroids). Malignant. (Carcinoma of cervix and body). (Sarcoma).
   - (*d*) Postmenopausal. (senile vaginitis). (pyometra).

Physiology

In order to obtain a better understanding of the pathology of vaginal discharge I propose briefly to review the present knowledge regarding the physiology of secretion from the lower genital tract.

You will recall that the vagina is lined and the cervix is covered with a modified skin or stratified squamous epithelium. Normally, these cells, con-

* Paper read at a meeting of the Winnipeg Medical Society, October 20th, 1939.

taining glycogen, are being constantly desquamated and under the influence of the vaginal lactobacilli (of Doderlein) yield lactic and other organic acids. This acid medium is inimical to the growth of all organisms, except the yeasts and the normal flora, and constitutes nature's first line of defence against bacterial invasion. It is customary to measure acidity and alkalinity in terms of pH (neutrality=7, acidity=below 7, alkalinity =above 7). The normal vaginal reaction thus stated is pH 4 to 4.5, i.e., moderately acid. The pH can be quickly determined with the use of Squibb's Nitrazine Test papers and a standard color chart.

The stratification of the vaginal cells and the deposition of glycogen therein is initiated and controlled by the hormone, oestrin, produced in the follicles of the ovaries. Before puberty and after the menopause oestrogen is absent in the circulating blood, hence the vaginal mucosa is thin, lacks glycogen and is unable to provide an acid producing medium. In consequence bacterial invasion and vaginitis readily occur at these age periods (spec. fevers in children, senile vaginitis). The new-born female infant carries over enough of its mother's oestrin to maintain a thick lining and an acid vagina for about two weeks and so resists early neonatal vaginal infection. During the childbearing period the mucosa is thick, rich in glycogen, and vaginal pH is maintained at about 4 to 4.5, a reaction at which pathogens succumb. Were it not for coitus, pregnancy and labour, menstruation, etc., such a pH would be constant; unfortunately such is not the case.

The normal secretion from the cervix is a clear, viscid, alkaline fluid (pH 7.5). Infection in the cervix will increase the flow of this alkaline medium and tend to raise vaginal pH. Consequently bacteria can flourish in vagina and vaginitis may become associated with the endocervicitis. The squamous cells become macerated and quickly peel off in an alkaline medium and are replaced by a single layer of columnar cells which as we have seen are normally exposed to a pH of at least 7.5 (in the cervix). The loss of the opaque squamous covering and its replacement by a thin layer produces the so-called *erosion* around the external os. Such a lesion per se is of no significance—it merely indicates an excessive alkaline cervical flow or a lessened acidity in vaginal vault. The normal vaginal secretion is not produced by glands, as they are absent from the vagina, but on the contrary represents shed squamous epithelium and bacteria. It is a thick, crumbling white material and on mixing with the clear cervical flow, produces the familiar curdy, acid substance normally found in the vaginal vault of healthy women.

Investigation

Now, let us turn to abnormal types of discharge. As to *color*—white means slight or no infection, to yellow or green which suggests pus and infection; *consistency*—*thin* suggests vaginitis, *thick*, ropy or stringy suggests endocervicitis; skin *irritation* — vaginitis, none=endocervicitis; *odor*—mucoid none, purulent=offensive (of endocervicitis and vaginitis).

In the investigation of a case, all these physical properties should be noted, as they assist in the diagnosis. The pH of the discharge is tested, smears taken from urethra and cervix, and a hanging-drop of freshly diluted, warm discharge is taken. If uncertain as to the origin—cervical or vaginal—of the flow, Schultze's Tampon Test may be done:—dry mop vagina, insert a dry tampon against cervix and emamine in a few hours. If cervical, the upper surface will be saturated and none will appear at vulva. I cannot emphasize enough the importance of accurately locating the source and aetiology of discharge in each case if treatment is to be successful. A careful bimanual pelvic and a specular examination are routine. Sudden onset of a leucorrhoea suggests acute gonorrhoea or a fistula; nearly all other types are of more gradual onset.

Clinical Types

The first clinical type I shall mention is of relatively frequent occurrence. The patient is commonly a young unmarried woman who complains of a constant, non-irritating, white discharge, worse pre and postmenstrually and often requiring a pad. She is of the hypersensitive type, may fear gonorrhoea or dread offending socially. This psychological factor aggravates the condition and a vicious circle is set up. These patients are usually engaged in sedentary occupations which favor constipation and pelvic engorgement, and unnatural, excessive or unsatisfied sex life adds to the disturbance Examination reveals a normal pelvis and an excess of the normal vaginal secretion—microscopic examination shows only squamous cells, thick bacilli, few or no pus cells and pH is 4. Reassurance, readjustment of living regime, avoidance of local treatment generally suffice. In a few a desiccating powder applied to vulva to absorb discharge may be necessary at first.

I have already referred to the parous woman with cystocele, etc., and will not mention this type further.

The next class constitutes a large, somewhat ill-defined group of women who are below par physically, tire easily, work too hard, are thin, anaemic, and constipated. They complain of frequent head colds and of a thin, irritating, purulent leucorrhoea, which may or may not contain the Trichomonas. These people lack vaginal glycogen and have low blood oestrin (often scanty or infrequent periods), and thus the local defense v.s. non-specific bacteria is removed and a low grade vaginitis set up. Attention to general health, correction of the anaemia, etc., together with theelin injections and suppositories, B — lactose capsules and acid douches will take care of most of these cases.

Another type is the woman who douches too often or uses strong antiseptics and deodorants (a chemical, later a bacterial vaginitis). Simple

abstention from the douche often produces marvellous results.

Diabetics are very susceptible to vaginitis, especially Trichomonas, thrush, and a non-specific type. Anti-diabetic regime plus local treatment is necessary to effect a cure, and these are often persistent cases. Pruritus may overshadow discharge as a symptom.

However, most leucorrhoeas are the result of purely local lesions, and of these, *chronic infection of the cervix* is by far the most common and important. In the majority it is the result of the trauma of labor or abortion or of gonorrhoea. The discharge is mucoid, or mucopurulent, thick, stringy or ropy, and not very irritating. It varies from yellowish white to green in color. Specular examination reveals usually an old lacerated cervix, eversion of lips, and an erosion. As the infection spreads, the whole cervix becomes enlarged, irregular and firm (cervicitis). Most parous women have or have had such a discharge to some extent, but have resigned themselves to it believing it to be the universal lot of the childbearing woman. The treatment in mild and moderate cases is linear cauterization with the fine wire (nasal tip) cautery after thorough removal of mucus and discharge. This can be done in the office and may need to be repeated in a month or six weeks (give technique). More advanced cases require Hyam's conization or a Sturmdorff amputation. The majority of obstetricians today examine their puerperal patients 4 to 6 weeks post partum and if even a slight endocervicitis (and erosion) is present lightly cauterize the cervix. By so doing troublesome discharge, dating from the birth of a child, can be almost eliminated. At the same time the restoration of the cervix to a healthy state reduces the future hazard of carcinoma, and perhaps, of only slightly less importance, chronic pelvic pain and focal infection.

Next in frequency as a cause of chronic leucorrhoea is *Trichomonas vaginalis vaginitis.* The discharge is *thin,* purulent, greenish-yellow, irritating, profuse, often foamy, and offensive. In acute cases there may be severe pruritius vulvae, widespread erythema of perineum and thighs, soreness, dyspareunia, insomnia and depression, even suicide. In this discharge is regularly found the Trichomonas vaginalis, an organism 2 or 3 times the size of a pus cell, round or spindle shaped, actively motile and flagellated, together with many pus cells. Some question the aetiologic importance of this organism, ascribing the infection to a specific streptococcus. The matter is not yet settled, but in practice finding a discharge teeming with Trichomonas vaginalis clinches the diagnosis, and improvement or cure is associated with their diminution or disappearance. One or two Trich. in a field have little significance. Examination reveals abundant discharge, irritation of skin, and redness of vestibule. Bulk of discharge is found in the vaginal vault, walls of the latter and the surface of cervix being spotted with peculiar small red blotches (strawberry appearance). The urethra and endocervix in a typical uncomplicated case show no evidence of infection. PH is 5 to 7, depending on acuteness of infection. Organisms are readily found in a hanging drop preparation, their characteristic jerky motility being diagnostic.

There are many drugs and techniques. Acid douches, B—lactose and boric acid capsules, Devegan, Aldarsons, silver picratol are all used. Treatment must be prolonged. I have been able to diagnose Trich. vaginitis in 80 to 90% of cases clinically and have confirmed it by microscope.

The appearance in acute and subacute gonorrhoea affecting the lower genital tract is familiar to all. By careful examination it should always be possible to differentiate it from Trich. vaginitis, yet I know the two are frequently confused. Many a woman in the past has been unjustly condemned as having gonorrhoea when in truth she had an innocent Trich. vaginitis. And at present, largely as a result of injudicious drug advertising, many with gonorrhoea are diagnosed and treated as cases of Trich. infection. However, the two diseases may well be associated in any case, thus emphasizing the importance of routine g.c. smears in every case of leucorrhoea. In acute g.c. endocervicitis the discharge is a thick, creamy or muco-purulent, greenish-yellow exudate, which can in most cases be expressed also from urethra and which reveals typical organisms on staining properly taken smears. Sudden onset of a discharge with burning and dysuria a few days after a suspicious exposure overwhelmingly favors g.c. Trich. vaginitis is of gradual onset and in only the very severe cases are there urinary symptoms.

Chronic gonococcal infection of cervix is clinically, and all too often bacteriologically indistinguishable from simple, non-specific endocervicitis. Repeated smears and provocative applications may reveal the conococci.

The next group comprises patients suffering from benign and malignant neoplasms. Although in most of these bleeding or some other symptom overshadows leucorrhoea, there are certain characteristic types of discharge found. Cervical and endometrial polyps tend to aggravate the normal pre- and post-menstrual leucorrhoea, and in cervical polyps the discharge is often of a peculiar mucilage-like character. Endometrial hyperplasia and polypi and submucous fibroids may produce a thin, watery discharge. Sloughing fibroids and infected retained products of conception give a very offensive purulent flow from the external os. In carcinoma of the uterus the discharge is at first clear and watery, later blood-stained, and finally very foul and with the appearance of dirty dishwater.

Post-menopausal leucorrhoea may result from Trich. or thrush, but generally is the sign of a (1) senile vaginitis or (2) pyometra. In postmenopausal vaginitis the mucosa is thin and atrophic, breaks and bleeds readily, and adhesions finally form. The condition is due to absence of normal oestrin-glycogen—lactic acid change, and

hence organisms from bowel, etc., thrive without harm. These cases with a thin, purulent, often bloody discharge yield to oestrogenic therapy—orally, locally, and intramuscularly. This thickens the mucosa, restores glycogen, lowers pH and destroys bacteria. B—lactose capsules are useful here.

Pyometra generally means an associated carcinoma of body or cervix, but in past year I have seen three or four cases resulting from retention of secretion behind a cervical stricture, the result of post-menopausal atrophy and narrowing of cervical canal. Curettage revealed no tissue. Dilatation and a few days' drainage via hard rubber tube sufficed to cure them.

I have referred already to *Thrush Vaginitis.* This type is due to infection with monilia or yeast-like organisms and is seen especially during pregnancy and in diabetics. The vagina is covered with thick, milk - white, semi - solid masses which adhere to walls and on removal leave an angry dark red base. Pruritus may overshadow the complaint of discharge. Stain smear with carbol fuchsin—reveals mycelial threads with budding. The vaginal pH is below 4, the only infection in which acidity is increased. Soda bicarb. douches and painting walls daily with 1% aqueous gentian violet is specific.

Finally, are those cases of leucorrhoea due to the mechanical irritation of *foreign bodies*—neglected pessories in old women, of contraceptive apparatus in younger women, and more recently a peculiar brownish leucorrhoea following the use of Tampax. Time forbids mention of vulvovaginitis in children which is now being satisfactorily treated by local application of oestrogenic preparations.

In conclusion, I must remind you that I have been able to review rather sketchily only the commoner types of vaginal discharge met with in practice. I trust however, that this presentation may stimulate some of you to take up the subject yourselves and perhaps it will help others to a better understanding of the logical treatment of this rather unromantic symptom.

NOTICE

One vacancy for the post of Thoracic Surgeon on the honorary attending staff of St. Boniface Hospital. Applications may be sent to Sister Superior before November 18th, 1939.

COUGHS, COLDS AND OTHER RESPIRATORY DISEASES

Special Articles and Association Notes

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Reports of Committees

Report of Committee on Credentials and Ethics

The President and Members
of the Manitoba Medical Association.

Your Committee on Credentials and Ethics begs to report as follows:

In June, 1935, the Council of the Canadian Medical Association decided upon a revision of the Code of Ethics. The late Doctor D. A. Stewart, then Chairman of the Committee on Credentials and Ethics of the Canadian Medical Association, undertook the task of revision with enthusiasm. He re-wrote the Code to bring it into line with such present day developments as the radio, commercial advertising, and the modern hospital, and had practically completed his work before his untimely death in February, 1937.

The Chairmanship of the Committee then devolved upon the undersigned, and a draft was submitted to Council of the Canadian Medical Association in June, 1937. Council sent back the draft for further revision and under the guidance of a nucleus Committee in Winnipeg the second draft was prepared, which was accepted by the Council on June 20th, 1938, and dedicated to Doctor D. A. Stewart.

The new Code of Ethics has been printed in the first edition in the number of ten thousand copies. The Executive Committee of the Canadian Medical Association has authorized a French version, and this is now being prepared under the guidance of Doctor Gerin-Lajoie of Montreal.

It is recommended that this revised Code of Ethics of the Canadian Medical Association be adopted by the Manitoba Medical Association Executive Committee.

All of which is respectfully submitted.

ROSS MITCHELL,
Chairman,
Committee on Credentials and Ethics.

Report of Committee on Maternal Mortality

The President and Members
of the Manitoba Medical Association.

Your committee begs to report as follows for the year 1938-39.

During 1938 there were 13,534 live births and 339 stillbirths. There were 37 puerperal deaths, giving a rate of 2.7 per 1,000 live births. Eleven (11) deaths (six of them were septic) were due to abortion, again the highest single cause of puerperal death. Nine (9) were due to haemorrhage, six (6) to toxaemia and four (4) to puerperal septicaemia.

A maternal mortality rate of 2.7 per 1,000 live births is the lowest rate ever recorded for Manitoba—the profession is to be congratulated on this showing. Is this low rate permanent or an accident? Can it be still further reduced? How much effect did the pregnancy survey in the province have on this improved death rate? These are questions that your committee have been considering.

The Provincial Department of Health and Public Welfare is carrying on the pregnancy survey for another year. It is hoped that the profession will continue to co-operate to an even greater extent during this second year and that the results will prove that our low maternal death rate for 1938 can be maintained or bettered indefinitely.

All of which is respectfully submitted.

J. D. McQUEEN,
Chairman for the Committee
on Maternal Mortality.

Committee on Cancer

The President and Members
of the Manitoba Medical Association.

As a representative of the Committee on Cancer, I beg to report that our activities over the past year have been confined largely to the operations of the Committee for the Control of Cancer of the Canadian Medical Association, the Canadian Society for the Control of Cancer and the Cancer Relief and Research Institute of Manitoba.

We have had some difficulty in deciding upon the respective activities of the latter two organizations. It was felt that the development in this Province of the Canadian Society for the Control of Cancer should be undertaken, but it was found rather difficult to carry out the proposed activities without conflicting with the successful operations of the Cancer Relief and Research Institute. For this reason a very definite curb has been placed on the activities of the Canadian Society for the Control of Cancer.

Arrangements are being made, however, for a meeting of the representatives of both organizations in the hope that a basis for close co-operation and mutual advancement of ideals and practice will evolve.

The annual meeting of the Canadian Society for the Control of Cancer is to be held sometime during the annual meeting of the Manitoba Medical Association.

All of which is respectfully submitted.

G. S. FAHRNI,
Chairman, Committee on Cancer.

Report of Executive Committee

The Members of the
Manitoba Medical Association.

Your Executive Committee begs to submit the following report for 1938-39:

Rural Relief: The problem of payment for medical care of citizens on relief in rural areas has been considered on several occasions. The Committee on Sociology sent a questionnaire to the medical practitioners in rural areas, and made a detailed analysis of the replies. On the recommendation of the Committee on Sociology, the Executive decided at a meeting on May 23rd, 1939, "that the best solution of the difficulties with regard to the care of indigent cases in rural areas would be that the Executive offer to the practitioners concerned the assistance of a representative of the Manitoba Medical Association who might be sent to help the local medical men negotiate with their Councils, provided that in each case the request for assistance should come from all the doctors in the area concerned." This was subsequently extended at a meeting on June 12th, 1939, by the addition of "or from the organized medical society."

Acting on this principle, the Chairman of the Committee on Sociology attended meetings with two groups of practitioners in areas outside of Winnipeg.

Unemployment Relief Medical Services in Winnipeg: This problem was under discussion by the Committee on Sociology and the Medical Health Officer of the City of Winnipeg, and at a meeting on December 15th, 1938, the Executive Committee advised the Committee on Sociology that they saw no reason for departing from the original principle of the contract with the City Council.

Health Insurance: The Committee on Economics of the Canadian Medical Association have been investigating the question of Health Insurance and associated problems, such as contract practice, lodge practice, etc. The Committee on Sociology made an exhaustive study of the proposals of the Canadian Medical Association Committee, as published in the Canadian Medical *Journal,* September, 1937. They also prepared a memorandum on "Some Problems of Health Insurance." These were both considered at an Executive meeting on January 17th, 1939, and, with some amendments, were sent on to the Canadian Medical Association for study. In this report the following paragraph was included: "The Executive Committee of the Manitoba Medical Association agrees that the time has arrived when the Canadian Medical Association should define a policy with regard to Compulsory Health Insurance. If requested by a Government we should be ready to submit a plan. The Executive Committee of the Manitoba Medical Association recommends that the plan be based on the principles adopted by General Council at the Annual Meeting of the Canadian Medical Association at Ottawa in 1937, and printed in the *Journal* of the Canadian Medical Association of that year, as amended, and in conjunction with the memorandum 'Some Problems in the Consideration of Health Insurance.'"

With regard to the general problem of medical service the delegates to the meeting of the Council of the Canadian Medical Association were instructed at a meeting of the Executive Committee on June 12th, 1939, as follows: "To support the recommendations of the Committee on Economics of the Canadian Medical Association, but should recommend that the Canadian Medical Association should formulate the general principles required in a medical service for the nation on the lines of the proposals of the British Medical Association, stating that the amount of service required, its cost, and the cost and method of administration will require a detailed fact finding investigation, and that the Canadian Medical Association should at once set up the machinery to secure the necessary information, and that the proposals of the Canadian Medical Association be made available to the governments and the public by the publishing of a pamphlet or otherwise."

Lodge Practice: The Committee on Sociology presented a report on Lodge Practice in Winnipeg at a meeting of the Executive Committee on January 17th, 1939.

Salaries to State Medical Officers: At the Executive meeting on January 17th, 1939, the Committee on Sociology submitted a detailed report on salaries to state medical officers and other doctors on full time salary in Manitoba. This was forwarded to the Committee on Economics of the Canadian Medical Association for study, along with the reports from other provinces.

Federation: The Committee on Constitution and By-Laws considered this problem on several

occasions and finally made a report to the Executive meeting on June 12th, 1939, with the following recommendation which was adopted: "The Committee recommends that the Manitoba Medical Association should change its status to that of a Division of the Canadian Medical Association, provided that (1) the Manitoba Medical Association shall retain such features of its constitution as it considers important, and, (2) that the Manitoba Medical Association may revert to the status of a branch if it so wishes after one year's notice of such intention."

At an Executive meeting on August 28th, 1939, the Executive Committee instructed the Committee on Constitution and By-Laws to study the constitution of the Manitoba Medical Association with a view to any revision that might be necessary in case the Manitoba Medical Association decided at the Annual Meeting to become federated with the Canadian Medical Association.

Hospital Aid Act and Public Ward Patients: This problem has been considered at several meetings and the feasibility of modifying the form of admission of public ward patients to hospital to include a statutory declaration as to the patient's financial status has been suggested, but no final decision has as yet been arrived at.

In addition to routine business the Executive considered several other subjects of importance, including Radio Broadcasting, Representation on the Medical Appeal Board of the Workmen's Compensation Board, the status of Physiotherapists, and the provision of medical services in case of war.

The work of the Executive Committee has been greatly facilitated by the efforts of the various standing and special committees, particularly the Committee on Constitution and By-Laws and the Committee on Sociology. The Committee on Constitution and By-Laws has made on several occasions an exhaustive study of the problems of federation with the Canadian Medical Association. The Committee on Sociology has made a detailed study of Health Insurance and several other important aspects of Medical Economics, in addition to being concerned with the details of the medical service scheme for relief cases in Winnipeg, and assisting in arriving at a solution of the problem of relief cases in rural areas. The work of this Committee has more than justified the decision of the Executive in 1934 to establish such a Committee on Sociology, and the Association is indebted to the Chairman and all the members for their continued interest in the problem of Medical Economics.

Conclusion: More and more claims are being made upon the time of the members of the Executive and other Committees of the Manitoba Medical Association, but the strength of such an organization depends in the final analysis upon the moral support of the majority of the members of the profession. Problems cannot be left entirely to the responsible officials for solution, but every member of the Association must take an intelligent and active interest in the affairs of the Association, particularly in these times of rapid changes in our sociological relationships.

W. S. PETERS,
President.

C. W. MacCHARLES,
Honorary Secretary.

Report of Committee on Sociology

The President and Members
of the Manitoba Medical Association.

Your Committee on Sociology begs to submit the following report:

Each year the Committee is required to deal to an increasing degree with questions of medical economics, and of the eight outstanding problems presented to it for study and report during the last year, less than one half had to do with the Winnipeg medical relief scheme. It may also be noted that the ready response by practitioners to requests for information, statistics, etc., shows an appreciation of the work that is being done by the Executive body to improve the economic conditions of the profession. A very large percentage of replies to questionnaires is received from the urban practitioners; a woefully small response from the rural members, though it must be added that those who did reply went to a great deal of time and trouble to show the complete picture.

The rural survey, the Committee's largest undertaking, has been described fully in the Manitoba Medical *Review;* it is not understood why there has been so little response to the offer of assistance to individuals or small groups, made by the Executive of the Manitoba Medical Association.

The investigation with regard to salaries and conditions of employment of institutional and state medical officers occupied much time. Only a short resume of this was given in the *Review* for the very good reason that a statement of salaries, unless accompanied by a searching investigation of conditions of employment, pensions, etc., would be worthless. Such an investigation, if undertaken, will require a great deal of research, both locally and nationally, but might form the basis for an improvement in the status of civil servants.

The response to the questionnaire on lodge practice was very gratifying. It was known from other sources that thirty-six doctors were employed by lodges, and of these thirty-five replied.

Health Insurance, a very live question at present, occupied a great deal of the Committee's time. Owing to the desire of groups of citizens to pay their doctors' bills in the same way that many of them are now paying their hospital bills, requests for medical services on a per capita basis are frequent. It is to be noted that contracts are being made by doctors, either as individuals or small groups, and it would appear that the lesson learned over five years ago has been forgotten.

At that time the practitioners of Winnipeg found that it was only by the closest co-operation and working as a unit, that satisfactory terms could be obtained. A contract for health insurance when unremunerative, can only result in poor work by the practitioner, dissatisfaction to the recipient, and general discredit to the profession. Some health insurance schemes were described in a recent circular to the profession, and the discussion at this meeting should be of value.

Many problems arising out of the medical relief scheme were discussed with representatives of the City Council. It would appear that the payment of an agreed sum per annum to the doctors in return for a complete service was favored by the Unemployment Relief Department. Your Committee being familiar with the operation of such a plan in other cities rejected it. The present scheme now operates on a yearly basis and is subject to revision by agreement.

A brief was prepared and submitted to the Goldenberg Commission. Copies of it were sent to all panel practitioners.

For several reasons a survey of illness in 1938, similar to that of 1937, has not been published, as the Hollerith cards are on file, this can be done when required by the expenditure of time and money.

No apology would appear to be necessary for the length of this report, since it is intended to draw your attention to the wide field that is now covered by the term "Medical Economics." In conclusion may I, as Chairman, express my appreciation of the services rendered by every member of the Committee. This report will give you an idea of the magnitude and scope of their labors. There is rarely an absentee from Committee meetings. Discussions are carried out on a broad basis, and sectional interests are never put forward in opposition to general welfare. Your Committee serves you well, and will I hope accept my gratitude for the assistance and loyalty that each one has shown to me.

All of which is respectfully submitted.

E. S. MOORHEAD,
Chairman,
Committee on Sociology.

OBITUARY

DR. JOSEPH B. CHAMBERS

Dr. Joseph B. Chambers, a former medical superintendent of Brandon and Selkirk Mental Hospitals, died at Los Angeles September 22nd, at the age of 82. He graduated from Victoria College, Cobourg, in 1880; came to Winnipeg in 1882, and practiced law there and in Glenboro until 1895, when he entered Manitoba Medical College, and graduated in 1898. He practiced at Elgin until 1907, when he joined the staff of the Brandon Mental Hospital. He moved to Los Angeles in 1925. He was a veteran of the Riel Rebellion.

The Canada Year Book 1939

The publication of the 1939 edition of the Canada Year Book is announced by the Dominion Bureau of Statistics. The Canada Year Book is the official statistical annual of the country and contains a thoroughly up-to-date account of the natural resources of the Dominion and their development, the history of the country, its institutions, its demography, the different branches of production, trade, transportation, finance, education, etc.—in brief, a comprehensive study within the limits of a single volume of the social and economic condition of the Dominion. This new edition has been thoroughly revised throughout and includes in all its chapters the latest information available up to the date of going to press.

In commemoration of the Royal Visit to Canada, May 17 to June 15, 1939, color plates of Their Majesties King George VI and Queen Elizabeth, together with official pictures of incidents connected with the unveiling of the National Memorial and of the Royal Assent to legislation of the 1939 Session of Parliament, appear as frontispiece. At pp. 1155-1160 a short account of the Royal Tour across Canada together with a condensed itinerary is given.

Persons requiring the Year Book may obtain it from the King's Printer, Ottawa, as long as the supply lasts, at the price of $1.50, which covers merely the cost of paper, printing and binding. By a special concession, a limited number of paper-bound copies have been set aside for ministers of religion, bona fide students and school teachers, who may obtain copies at the nominal price of 50 cents each.

Department of Health and Public Welfare

NEWS ITEMS

PSYCHOLOGICAL SYMPTOMS IN ADOLESCENCE: The following is an article on the above subject by Z. Rita Parker, M.D., which was published in a recent issue of "Preventive Medicine:"

"Certain symptomatologies which present themselves in adolescence (between 12 and 21 years of age) are often passed over as natural or inevitable, which in any case will be outgrown. If the psychiatrist were consulted with the same freedom and from the same preventive standpoint as is for example the nose and throat specialist, many of the emotional difficulties which may handicap the remainder of the child's life could be dealt with while they are in the process of developing—a period when they are most amenable to influence. One of the major obstacles to such an approach is due to the fact that the average physician associates modern psychiatry with the psychiatry of his medical school days which dealt primarily with fully established psychoses. It is unfortunate that the growing attitude of regarding the pediatrician as an agent of prevention, whose primary interest it is to keep the child well, is not carried over into the sphere of those emotional problems more or less peculiar to the age of adolescence. For it is here, if anywhere, that prevention is as possible as it is most certainly desirable.

"Before discussing those symptomatologies which present themselves in adolescence and deserve recognition and treatment, it will perhaps be well to glance for a moment at their historical background in the earlier life of the child. Clinical experience has shown that these symptomatologies represent a reactivation (more or less inappropriate to adolescence) of feelings manifested during, and entirely appropriate to, the period from birth to six or seven years of age. And certainly it is no accident that parents frequently make the observation that a son or daughter will behave at one moment exactly as he did in a temper tantrum at three or four years of age, and a few minutes later will discuss some intellectual interest with the reasonableness and emotional objectivity of the exceptional adult.

"Let us summarize, then, some of the more familiar reactions observed and reported by parents and by nursery school and primary school teachers during the period of early childhood which may reassert themselves in varying degrees in adolescence and make for difficulty. First we may mention love for, or hostility towards, either parent or both, or a brother or sister. Second, curiosity on the part of the child regarding the relationship between mother and father; curiosity about himself and his own bodily functions and the general environment in which he lives. A third reaction is the absorption of the child in doing what he wants to, regardless of all considerations other than the pleasure derived ('this feels good' or 'I like it'); in a word, a completely hedonistic attitude towards himself and others. Rapid emotional swings are among the most characteristic reactions of the child; for example, a child may angrily strike a playmate if his pleasure is interfered with, yet be incapable of understanding why the same playmate refuses to co-operate in play immediately thereafter. The fantasying of the child is at least as real to him as is the actual world he lives in, and to this fact is doubtless ascribable the extreme degree of pleasure which his fantasies afford him; but it is also noteworthy that his fantasies are of a kind which are largely unattainable and unrealizable, and that they have the conspicuous function of consoling him for his helplessness and dependence, helping him at the same time to deal with hostile feelings which he cannot act out in real life. Finally, and often of great importance, are the feelings of guilt which even very young children may unmistakably manifest: a child's reaction to a physical illness or to some unavoidable disappointment may be to feel that this calamity is punishment for wrongdoing.

"Any of the emotional strivings of the period of early childhood that have not been successfully dealt with may reappear in adolescence in their original intensity, with or without apparently adequate provocation—often, at any rate, under a provocation entirely insignificant in proportion to the magnitude of the emotional explosion. There are superadded the several complications incident to sexual development, which have an emotional as well as physical component. This involves, for example, such matters as the boy's reaction to masturbation and to nocturnal emissions; the girl's reaction to masturbation and to menstruation (which may range from pride in the establishment of the menses to regarding menstruation as a serious periodic illness); a change in the attitude of both boys and girls towards the opposite sex (formerly each valued the opposite sex as to whether they were likeable or not likeable playmates, good or bad sports), with a new appreciation as to whether the member of the opposite sex is 'good looking,' is popular, or has 'sex appeal.' At this time we find the boy trying very hard to establish himself as an active, adequate male, not only in his own estimation but in the opinion of his associates, elders as well as peers. At the same time the girl is concerned with her attractiveness in general and the response received from boys in particular. It is important for her to realize that while her personal tastes, interests, and development are valuable, the desire to attract and to be pleasing to the boys she likes is a worthy objective—biologically and psychologically sound. The fantasy life is reactivated at adolescence and the so-called 'day-dreams' are characterized by an attainable quality, in contrast to the fantasies of early childhood; for example, the making of plans about what they hope to do in the future. Romancing about the opposite sex is usually an outstanding feature of the fantasy life of this period.

"Since the difficulties arising in adolescence are apt to be dismissed as 'the upheaval of adolescence' which the child will 'outgrow,' it may be well to list and discuss some of the symptoms which merit attention, investigation and treatment:

1. Hostility directed towards one person or many persons of any age or either sex.
2. Excessive shyness.
3. Passivity in boys or over-dominance in girls.
4. Repeated minor or severe physical illnesses.
5. Greater than ordinary concern with physical health.
6. Deviations in behavior of an anti-social character.
7. Sudden or gradual loss of interest in things formerly of interest.
8. A feeling of inadequacy in relation to everyday affairs.
9. Guilt - feelings — either expressed as such or evident to adults.

"1. By hostility is meant a feeling of hatred which, self-evident as it often is, may be expressed in much more diverse or indirect ways than is commonly appreciated. Such hostility may gain expression so unobtrusively as to take the not readily recognizable form of good-natured but consistent non-co-operation in everything asked of the child. At the other extreme, obviously, is the child, for example, who says: 'I hate school and my teachers. There isn't a child in my class

that I like. I like animals better than people. I hate my sisters and brothers.' A favorite mode of expression of hostility in adolescence is ridicule. An especially common form of such ridicule is directed against existing institutions, regulations, customs, which the average child accepts automatically and quite as a matter of course; ridicule of this kind is fundamentally, in its attack upon authority, ridicule of the parents. It is to be emphasized that hostility toward the parents may occur quite irrespective of the parents' feeling and behavior towards the child. Indeed, one frequently has the rather surprising experience of finding hostility the outstanding difficulty in a child whose parents are conspicuous for their good will toward the child and their efforts to provide him with every possible legitimate pleasure and opportunity for achievement. There is no single reaction that is more destructive to a child's enjoyment of living, and consequently more ruinous to his future social adaptation throughout the remainder of his life, than unresolved hostility. It is probably an intuitive recognition of this fact that led an eminent Justice to repeat to his adolescent nephew the injunction of St. Paul, 'Let not the sun go down upon your wrath,' for his experience had taught him that anger and hatred are the most destructive forces affecting the life of a human being.

"2. Shyness needs no definition, but even more than in the case of hostility its existence is often concealed behind behavior that quite successfully masks its presence. To give but a single example, when a child is more or less continuously immersed in any given interest, such as reading, assembling a radio, or any other solitary occupation, it is frequently found that this preoccupation represents a flight from the fact that he is uncomfortable, even acutely miserable, in the companionship of children of his own age; while the actual shyness that underlies his apparently constructive behavior goes undetected.

"3. Passivity in a boy suggests that he is uncomfortable in the society of other boys, and feels inadequate to their customary activities. Over-dominance in a girl is suggestive of some underlying rebellion on her part against what is expected of her as a girl.

"4. In the haste to ascribe all the emotional difficulties of children to maladjustment in the parents, to parental incompatability or parental lack of understanding of the child, it has been quite consistently overlooked that repeated minor or severe physical illness may be responsible for more or less permanent maladaptation in the child. In a word, the child learns to use such illness as a means of escape from difficulties that confront him. Even when he does not turn physical illness to this end, the interruption of his routine and of the progress of his accomplishment, which prolonged or repeated illness forces upon him, may induce in him an attitude of hopelessness and defeat. The converse situation may also hold true; that is, underlying emotional problems may be the actual causation of physical illness at this as well as at any other age. In such circumstances it is obviously just as important to determine what is happening in the emotional life of the child and to deal with it constructively as it is to diagnose and treat the physical illness in question.

"5. Exaggerated preoccupation with health and concern with regard to it may be a cover for a much more deeply lying anxiety which in reality has reference to masturbation, to nocturnal emissions, to menstruation, etc. When this is so, and when it becomes in addition firmly ingrained, severe disturbance of the subject's later sexual adaptation in marriage may be the result. This anxiety about health in adolescence is a thing particularly easy to minimize or to dismiss as obviously fanciful and not worth taking seriously, but the actual fact is the precise opposite, so that it would be difficult to overemphasize the importance in many cases of this particular symptom.

"6. It is hardly necessary to state that anti-social behavior—such as running away from home, truancy, stealing, lying for the purpose of getting someone else into trouble (vindictive lying), and other equally outspoken manifestations of defiance of custom or authority, most of them familiar to every one—is readily recognizable as such. Its recognition as the expression of serious underlying emotional difficulty is however much less common. If emotional disturbances such as these are not worked out in adolescence, they may eventually lead the indvidual into a permanent state of conflict with the law; in other words, what is, in adolescence, a medical problem may develop into a social and criminological one.

"7. A sudden or gradual loss of interest in things formerly of interest—most readily noticeable in the case of academic failure or of withdrawal from former activities—may be said to be absolutely pathognomonic of some emotional disturbance in the child, such as a preoccupation with guilt feelings, fears, disturbing erotic fantasies, etc. Such children are often thought lazy and are handled accordingly, that is, by exerting pressure on them to resume their former activities, to spend more time on their academic work—a method of approach which only adds to the tension under which the child is laboring. This is so uniformly the first attempt at solution of what is a fairly common problem that it may be well to add a brief illustration. A boy of 15, a student at an excellent boarding school, while maintaining an 'A' academic standing, suddenly withdrew from all athletic competition and from all social contacts outside his own room. Every effort on the part of the headmaster and masters met with failure which was ascribed to 'stubborn non-co-operation.' A study of this situation revealed that the boy was obsessed by a fear of injuring himself or some one else with a sharp instrument. In his own room he had carefully locked up a pair of scissors and a pocket knife; the idea of stabbing with a pen had occurred to him, but he had reasoned it out that this would not inflict any serious injury. His keeping to his room served obviously as a protection, and in fact his only protection, against this fear of inflicting injury. There had actually been no change in his athletic or social interests; in reality he was suffering from the isolation which his morbid fear forced upon hm, so that his difficulty could only be dealt with by the resolution of the fear which was the fundamental etiology in the whole situation. There is also the more serious if much less dramatic example of the child who from earliest life has shown little interest in anything. Games and other activities of interest to the average child seem to offer no attraction to him; he is merely bored by them and can be prodded into taking part in them only with difficulty.

"8. Nothing is commoner than the feeling of inadequacy in everyday affairs, as indeed is attested by the popularity and ubiquity of the expression 'inferiority complex.' Needless to say, this term is not a diagnosis, any more than 'fever' is a diagnosis. The point of importance is that a feeling of inadequacy is a reaction to something, and it is necessary to determine the nature of that something if the underlying cause of the inadequacy is to be dealt with. Among many possible causes, one which is not uncommon but which may easily be overlooked is the fact of the child's having been in competition from early childhood with siblings or playmates who are superior, and inevitably so, by reason of age advantage, so that the child receives a lasting impress of his inferior performance and thus forms the habit of underestimating his own capacity.

"9. The mental phenomenon most often difficult of recognition for what it is, and which is at the same time second to none in its destructiveness to the individual, is guilt feeling. Occasionally, guilt feeling finds direct expression, as in the child who says, 'No matter what I do, I always feel as though I had done something wrong;' or, even more strikingly, 'I feel wicked all the time, but I don't do anything that's bad.' More

commonly, however, guilt feeling can only be inferred from the behavior of the child. Of such behavior, typical examples are an apologetic attitude, excessive obedience, submissiveness, willingness to carry out the every suggestion of parent or teacher, a propensity to take blame upon himself, and self-denying, self-punitive behavior of a more or less obviously expiatory character: 'I have no right to, I am not entitled to, such and such' is an attitude implicit in these self-imposed, self-denying ordinances. It is the symptom of guilt that has the most extensive repercussions in adult life of perhaps any of the symptomatologies which we have touched upon in the foregoing; for it is the basis of what may develop into a life-long attitude of self-defeat, an inability to accept satisfaction, happiness or success in love, work, or play.

"The reader will have observed two omissions in the foregoing resumé. One of these is the absence of clinical evidence in illustration of the statements made. This is a necessity imposed by lack of space; but it is a fact that a psychiatrist working with children can support any seemingly dogmatic statement in the above with abundant clinical material. The other omission is that the paper deals solely with symptomatology rather than with etiology; but the whole point of the paper is to bring out the importance of symptoms as warning signals to the medical man, while it is the work of the psychiatrist to elicit and treat the etiological factors. For the first step in preventive medicine is the early recognition of symptoms and their significance, not only in physical illness but in emotional disturbances as well."

COMMUNICABLE DISEASES REPORTED
Urban and Rural - Sept. 10th to Oct. 7th, 1939

Whooping Cough: Total 128—Winnipeg 66, Unorganized 32, Woodlands 5, Flin Flon 4, St. Boniface 4, Lawrence 3, Brenda 2, St. James 2, St. Vital 2, Ethelbert 1, Whitemouth 1 (Late Reported: Flin Flon 3, Brandon 1, Brenda 1, St. Boniface 1).

Scarlet Fever: Total 58—Winnipeg 34, Killarney 8, Unorganized 3, St. Boniface 2, St. James 2, Brandon 1, Charleswood 1, Kildonan East 1, Lansdowne 1, St. Paul West 1, Turtle Mountain 1 (Late Reported: Turtle Mountain 2, Roland Rural 1).

Measles: Total 35—Brenda 16, Winnipeg 7, The Pas 4, North Norfolk 2, Argyle 1, Hanover 1, Neepawa 1, Pembina 1, Unorganized 1 (Late Reported: Brenda 1).

Chickenpox: Total 27—Winnipeg 12, Kildonan East 4, Arthur 2, Brenda 2, Pipestone 2, Brandon 1, Hanover 1, Rosser 1, Virden 1 (Late Reported: Flin Flon 1).

Diphtheria: Total 24—Winnipeg 10, Hanover 7, Unorganized 2, Kildonan East 1, St. Clements 1 (Late Reported: Flin Flon 1, Selkirk 1, Unorganized 1).

Mumps: Total 18—Winnipeg 10, Kildonan East 3, Stonewall 2, Rockwood 1, Whitehead 1 (Late Reported: St. Francois Xavier 1).

Typhoid Fever: Total 14—Unorganized 4, Winnipeg 2, Dufferin 1, St. Boniface 1 (Late Reported: St. Clements 2, Unorganized 2, Rhineland 1, Selkirk 1).

Tuberculosis: Total 9—Winnipeg 8, Kildonan East 1.

Diphtheria Carriers: Total 8—Winnipeg 8.

Erysipelas: Total 6—Winnipeg 2, Fort Garry 1, Killarney 1, St. Boniface 1, Woodlands 1.

Anterior Poliomyelitis: Total 5—Gilbert Plains Village 2, Brandon 1, Shellmouth 1 (Late Reported: St. Boniface 1).

Influenza: Total 2—Winnipeg 1, Whitemouth 1.

Puerperal Fever: Total 1—Riverside 1.

Undulant Fever: Total 1—Winnipeg 1.

Lobar Pneumonia: Total 1—St. Vital 1.

Septic Sore Throat: Total 1—St. James 1.

Venereal Disease: Total 109—Gonorrhoea 71, Syphilis 38.

DEATHS FROM ALL CAUSES IN MANITOBA
For the Month of August, 1939

URBAN—Cancer 41, Tuberculosis 9, Pneumonia (other forms) 3, Syphilis 3, Diphtheria 1, Influenza 1, Pneumonia Lobar 1, Poliomyelitis 1, Puerperal Septicaemia 1, Typhoid Fever 1, Dysentery 1, all others under one year 20, all other causes 162, Stillbirths 11. Total 256.

RURAL—Cancer 26, Tuberculosis 10, Pneumonia (other forms) 4, Pneumonia Lobar 2, Influenza 1, Puerperal Septicaemia 1, Whooping Cough 1, Dysentery 1, other deaths under one year 27, all other causes 143, Stillbirths 14. Total 230.

INDIAN—Tuberculosis 8, Pneumonia (other forms) 5, Whooping Cough 2, Pneumonia Lobar 1, all others under one year 4, all other causes 7. Total 27.